J Substitute K'

23. (Four Times Amended) A thin film transistor comprising:

a semiconductor layer having an intrinsic or substantially intrinsic channel region;

a gate insulating layer contacting said semiconductor layer; and

a gate electrode adjacent to said semiconductor layer with said gate insulating layer therebetween,

wherein said semiconductor layer comprises a crystalline silicon semiconductor layer [containing oxygen, nitrogen or carbon at a concentration 1 x 10^{19} atoms/cm^3 or less and] and wherein said semiconductor layer shows a Raman shift at a wavenumber of 512 cm^{-1} or higher.

J2 Substitute K3

25. (Four Times Amended) A thin film transistor comprising:

a semiconductor layer having an intrinsic or substantially intrinsic channel region;

a gate insulating layer contacting said semiconductor layer; and

a gate electrode adjacent to said semiconductor layer with said gate insulating layer therebetween,

wherein said semiconductor layer comprises a crystalline silicon semiconductor layer [containing oxygen, nitrogen or carbon at a concentration 1 x 10^{19} atoms/cm^3 or less and] and wherein a ratio of a full band width at half maximum (FWHM) of a Raman peak of said semiconductor layer to a FWHM of a Raman peak of a single crystalline silicon is less than 3.

27. (Four Times Amended) A thin film transistor comprising:

a semiconductor layer having an intrinsic or substantially intrinsic channel region;

a gate insulating layer contacting said semiconductor layer; and

a gate electrode adjacent to said semiconductor layer with said gate insulating layer therebetween,

wherein said semiconductor layer comprises a crystalline silicon semiconductor layer [containing oxygen, nitrogen or carbon at a concentration 1 x 10^{19} atoms/cm^3 or less and] and wherein a peak intensity ratio Ia/Ic of said semiconductor layer is less than 0.4 where Ia represents a Raman peak intensity at a wavenumber of 480 cm^{-1} for an amorphous component of said semiconductor layer and Ic represents a Raman peak intensity at 521 cm^{-1} for a single crystalline silicon.

32. (Five Times Amended) A thin film transistor produced by a process comprising the steps of:

forming on a surface an intrinsic or substantially intrinsic semiconductor film having a region to become a channel region of the transistor, [said semiconductor film containing therein carbon, nitrogen or oxygen at a concentration of 1 x 10^{19} atoms/cm^3 or less,] said semiconductor film comprising a material selected from the group consisting of germanium and a germanium silicon alloy; and

irradiating said entire semiconductor film with a laser beam or a light having a strength equivalent to the laser beam with melting the semiconductor film to increase the degree of crystallinity thereof.

J4 cont.

33. (Three Times Amended) A thin film transistor comprising:

a semiconductor layer having an intrinsic or substantially intrinsic channel region;

a gate insulating layer contacting said semiconductor layer; and

a gate electrode adjacent to said semiconductor layer with said gate insulating layer therebetween;

wherein said semiconductor layer comprises a non-single crystalline silicon semiconductor layer [containing oxygen at a concentration 1×10^{19} atoms/cm^3 or less and said semiconductor layer] which shows a Raman shift at a wavenumber of 512 cm^{-1} or higher.

34. (Three Times Amended) A thin film transistor comprising:

a semiconductor layer having an intrinsic or substantially intrinsic channel region;

a gate insulating layer contacting said semiconductor layer; and

a gate electrode adjacent to said semiconductor layer with said gate insulating layer therebetween,

wherein said semiconductor layer comprises a non-single crystalline silicon semiconductor layer [containing oxygen at a concentration 1×10^{19} atoms/cm^3 or less and] and wherein a ratio of a full band width at half maximum (FWHM) of a Raman peak of said semiconductor layer to a FWHM of a Raman peak of a single crystalline silicon is less than 3.

35. (Three Times Amended) A thin film transistor comprising:

a semiconductor layer having an intrinsic or substantially intrinsic channel region;

a gate insulating layer contacting said semiconductor layer; and

J4 cont.

a gate electrode adjacent to said semiconductor layer with said gate insulating layer therebetween,

wherein said semiconductor layer comprises a non-single crystalline silicon semiconductor layer [containing oxygen at a concentration 1×10^{19} atoms/cm^3 or less and] and wherein a peak intensity ratio Ia/Ic of said semiconductor layer is less than 0.4 where Ia represents a Raman peak intensity at a wavenumber of 480 cm^{-1} for an amorphous component of said semiconductor layer and Ic represents a Raman peak intensity at 521 cm^{-1} for a single crystalline silicon.

36. (Three Times Amended) A thin film transistor produced by a process comprising the steps of:

forming on a surface an intrinsic or substantially intrinsic semiconductor film having a region to become a channel region of the transistor, [said semiconductor film containing therein carbon at a concentration of 1×10^{19} atoms/cm^3 or less,] said semiconductor film comprising a material selected from the group consisting of germanium and a germanium silicon alloy; and

irradiating the semiconductor film with a laser beam or a light having a strength equivalent to the laser beam to increase the degree of crystallinity of the semiconductor film.

37. (Three Times Amended) A thin film transistor produced by a process comprising the steps of:

forming on a surface an intrinsic or substantially intrinsic semiconductor film having a region to become a channel region of the transistor, [said semiconductor film containing therein nitrogen at a

concentration of 1 x 10^{19} atoms/cm^3 or less,] said semiconductor film comprising a material selected from the group consisting of germanium and a germanium silicon alloy; and

irradiating the semiconductor film with a laser beam or a light having a strength equivalent to the laser beam to increase the degree of crystallinity of the semiconductor film.

38. (Three Times Amended) A thin film transistor produced by a process comprising the steps of:

forming on a surface an intrinsic or substantially intrinsic semiconductor film having a region to become a channel region of the transistor [containing therein oxygen [at a concentration of 1 x 10^{19} atoms/cm^3 or less], said semiconductor film comprising a material selected from the group consisting of germanium and a germanium silicon alloy; and

irradiating the semiconductor film with a laser beam or a light having a strength equivalent to the laser beam to increase the degree of crystallinity of the semiconductor film.

Please add new claims 39-45 as follows:

--39. The thin film transistor of claim 23, wherein said crystalline silicon semiconductor layer includes oxygen, nitrogen or carbon at a concentration of 1 x 10^{19} atoms/cm^3 or less.

40. The thin film transistor of claim 25, wherein said crystalline silicon semiconductor layer includes oxygen, nitrogen or carbon at a concentration of 1 x 10^{19} atoms/cm^3 or less.

41. The thin film transistor of claim 27, wherein said crystalline silicon semiconductor layer includes oxygen, nitrogen or carbon at a concentration of 1 x 10^{19} atoms/cm^3 or less.

J5 cont.

42. The thin film transistor of claim 32, wherein said semiconductor film includes carbon, nitrogen or oxygen at a concentration of 1 x 10^{19} atoms/cm^3 or less.

43. The thin film transistor of claim 33, wherein said non-single crystalline silicon semiconductor layer includes oxygen at a concentration of 1 x 10^{19} atoms/cm^3 or less.

44. The thin film transistor of claim 34, wherein said non-single crystalline silicon semiconductor layer includes oxygen at a concentration of 1 x 10^{19} atoms/cm^3 or less.

45. The thin film transistor of claim 35, wherein said non-single crystalline silicon semiconductor layer includes oxygen at a concentration of 1 x 10^{19} atoms/cm^3 or less.

46. The thin film transistor of claim 36, wherein said semiconductor film includes carbon at a concentration of 1 x 10^{19} atoms/cm^3 or less.

47. The thin film transistor of claim 37, wherein said semiconductor film includes nitrogen at a concentration of 1x10^{19} atoms/cm^3 or less.